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SHORT COMMUNICATION

Clubiona analis Thorell 1895 from Burma: redescription and systematic position (Araneae: Clubionidae)

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Abstract. The holotype female of *Clubiona analis* Thorell 1895 is examined, illustrated, and redescribed. The systematic position of the species is discussed, and a map with the type locality together with those of related species is provided.

Keywords: Taxonomy, sac spider, Southeast Asia, Double Island

Recently, Southeast Asian representatives of the genus *Clubiona* Latreille 1804 have been revised by Deeleman-Reinhold (2001). Subsequently Dankittipakul & Singtripop (2008a, b), Jäger & Dankittipakul (2010) and Ono (2009) described new species from Thailand, Laos and Vietnam. The female of *Clubiona analis* Thorell 1895 was illustrated by Gravely (1931: Fig. 16C), Tikader & Biswas (1981: Figs. 118–119) and Biswas & Raychaudhuri (1996: Figs. 1, 6). None of these illustrations of *C. analis* is considered suitable for recognising the species unambiguously. Illustrations in the two latter publications even suggest that the authors misidentified or confused the species, as there are no similarities with real structures of the female type specimen; e.g., the bilobal posterior epigynal margin. Moreover, cheliceral teeth (3 anterior and 2 posterior) and eye arrangement (AME separated by same distance as PME) (Biswas & Raychaudhuri 1996: Figs. 1, 2) point clearly to a different species. Therefore, the present paper provides a redescription of *C. analis* and discusses its relationships.

The holotype female is preserved in 70% denatured ethanol. Female copulatory organs had already been dissected and were observed in 96% lactic acid. Spines of the prolateral, dorsal, retrolateral and ventral side of each leg segment are noted separately with three positions distinguished: proximal, medial, and distal. Some stronger bristles on dorsal patellae (d101 = 1 proximal and 1 distal bristle) may be counted as thin spines in other publications (e.g., Deeleman-Reinhold 2001). These are not listed in the spination pattern in the description below.

Abbreviations: ALE – anterior lateral eyes; AME – anterior median eyes; AW – anterior width of dorsal shield of prosoma; d – dorsal; OL – opisthosoma length; OW – opisthosoma width; p – prolateral; PL – prosoma length; PLE – posterior lateral eyes; PME – posterior median eyes; PW – prosoma width; r – retrolateral; RTA – retrolateral tibial apophysis; v – ventral; I–IV – referrring to leg numbers.

Museum collections (with curators): MHNG = Museum d'Histoire Naturelle Geneve, Switzerland (Peter Schwendiger), NHM = Natural History Museum London, England (Janet Beccaloni), SMF = Senckenberg Research Institute Frankfurt, Germany (Peter Jäger).

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Clubionidae Wagner 1887
Clubioninae Wagner 1887
Clubiona Latreille 1804

This genus currently consists of more than 460 species (Platnick 2011). Deeleman-Reinhold (2001) included a distinction of species groups within the genus. She did not follow Mikhailov (1995) in using subgenera, but used his intrageneric grouping, which is also used here. *C. analis*, together with 33 other *Clubiona* spp., was listed as species *incertae sedis* in Deeleman-Reinhold (2001).

hystrix group
Clubiona analis Thorell 1895
Figs. 1–10

Type material.—Female holotype (NHM 1895.9.21.72). BURMA [MYANMAR]: *Moulmein*: Double Island, Oates leg.

Note.—The type locality is located south of the Moulmein river entrance, ca. 25 air km south of Kyaikkami and 11 km offshore and is a granitic island (data from Rowlett 2010). GPS data obtained from Google Earth: 15°52′26.51″N, 97°35′09.56″E. The type is in bad condition, with almost all appendages and opisthosoma broken off. Only some measurements could be taken due to its fragile condition.

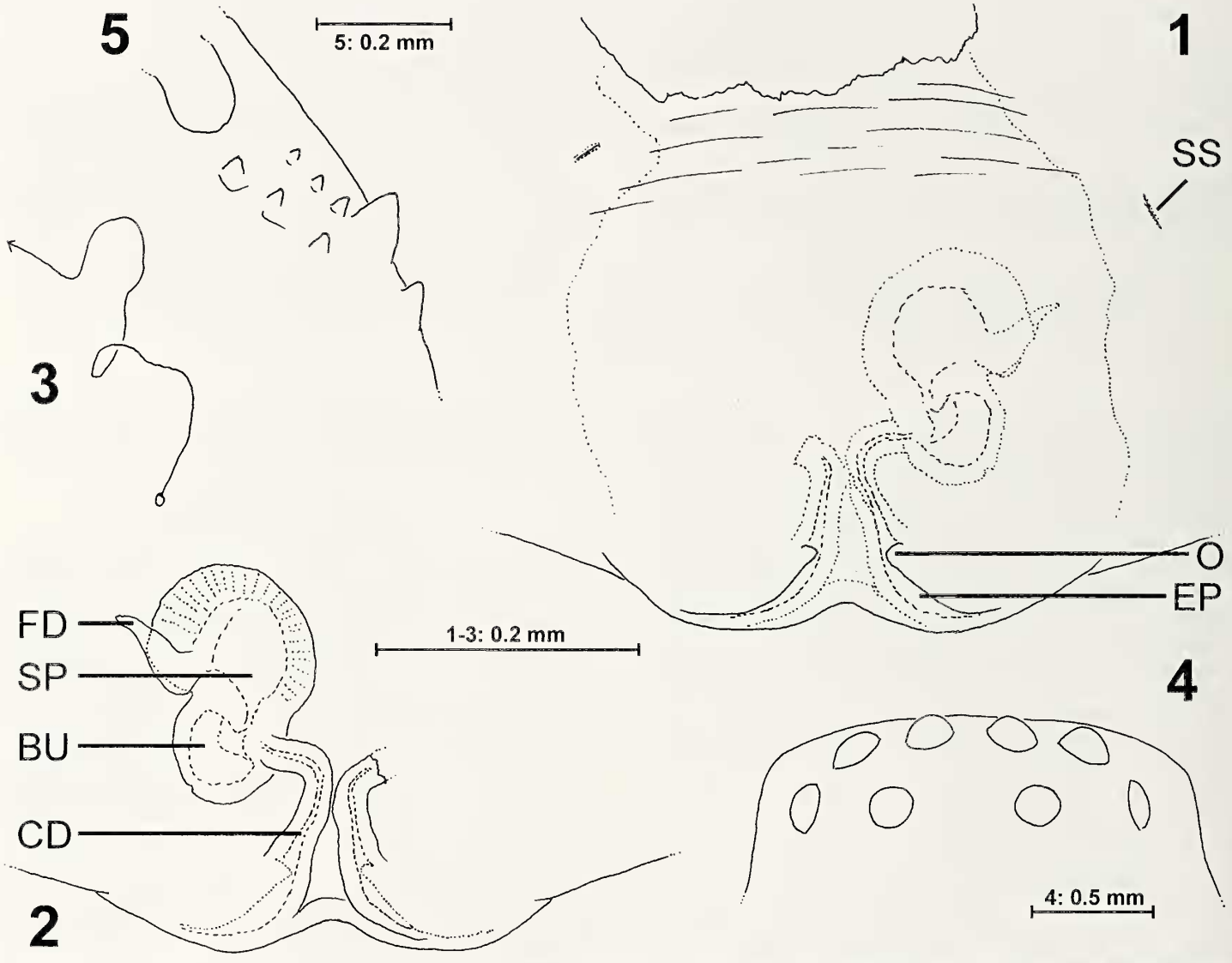
Additional material from *hystrix*-group examined for comparison.—*Clubiona damirkovaci* Deeleman-Reinhold 2001: 1 male, 1 female paratype (SMF 60487). MALAYSIA: *Malay Peninsula*: Gombak Research Station N of Kuala Lumpur, from bamboo internodes, D. Kovac leg. 1.VII.1991.

Clubiona maipai Jäger & Dankittipakul 2010: Male holotype, 9 male and 9 female paratypes (SMF, MHNG). THAILAND: *Mae Hong Son Province*: close to Ban Nam Rin, logged bamboo, by hand, D. Kovac leg. 13–24 September 2003.

Clubiona kuu Jäger & Dankittipakul 2010: Male holotype (SMF). LAOS (L15): *Luang Prabang Province*: SE Luang Prabang, Nam Khan, Ban Keng Koung, 372 m altitude, N 19°40.963′N, 102°18.442′E, along stream, disturbed forest, cultivated land, at tree bark, by hand, at night, P. Jäger & J. Altmann leg. 8.III.2006. 1 male paratype (SMF), Laos (L7), Luang Prabang Province, Nam Ou, Nong Khiao, Tham Pathok, 373 m altitude, 20°33.082′N, 102° 37.925′E, in front of cave, bananas, trees, bushes, at night, by hand, P. Jäger leg. 29 February 2008.

Diagnosis.—Small Clubioninae with body length of female holotype 9.2 mm, belonging to the *hystrix* species-group. Similar to *Clubiona damirkovaci* Deeleman-Reinhold 2001. Females can be distinguished from those of *C. damirkovaci* by the distinctly smaller bursae of the internal duct system (Fig. 2), by the more diagonally orientated epigynal pockets (Fig. 1), and the distinctly bilobal posterior epigynal margin (Fig. 1). Both species are distinguished from *C. maipai* by their short copulatory ducts (Fig. 2).

Redescription of female (holotype).—PL 4.1, PW 2.7, AW 1.8, OL 5.1, OW 2.0. Eye diameters (Fig. 4): AME 0.21, ALE 0.23, PME 0.18, PLE 0.20. Eye interdistances: AME–AME 0.13, AME–ALE 0.07, PME–PME 0.43, PME–PLE 0.22, AME–PME 0.16, ALE–PLE 0.12, clypeus AME 0.10, clypeus ALE 0.13. Leg measurements: leg I - (3.1, 1.8, 3.0, 2.0, -), leg II -; leg III - (2.5, 1.2, -, -, -); leg IV - (3.8, 1.6, -, -, -). Spination: Femur I p011, d111, r111, II -, III p111, d111, r111, IV p011, d111, r011; Patella I, III–IV r010; Tibia I v220.



Figures 1–5.—*Clubiona anal is* Thorell 1895, holotype female from Burma, Double Island (right half of internal duct system damaged and omitted here). 1. Epigyne, ventral; 2. Vulva, dorsal; 3. Schematic course of internal duct system, dorsal (open circle – copulatory orifice, arrow – fertilization duct in direction of the uterus externus.); 4. Eye arrangement, dorsal; 5. Right cheliceral furrow, ventral. Abbreviations: BU – bursa copulatrix, CD – copulatory duct, EP – epigynal pockets, FD – fertilization duct, SP – spermathecae, SS – slit sensilla.

Chelicerae with weak frontal bulge (Figs. 8, 9), cheliceral furrow with 4–5 anterior (2 large proximal, 2–3 small distal) and 3 small posterior teeth (Fig. 5). Spinnerets and anal tuberele elongated (Figs. 6, 7).

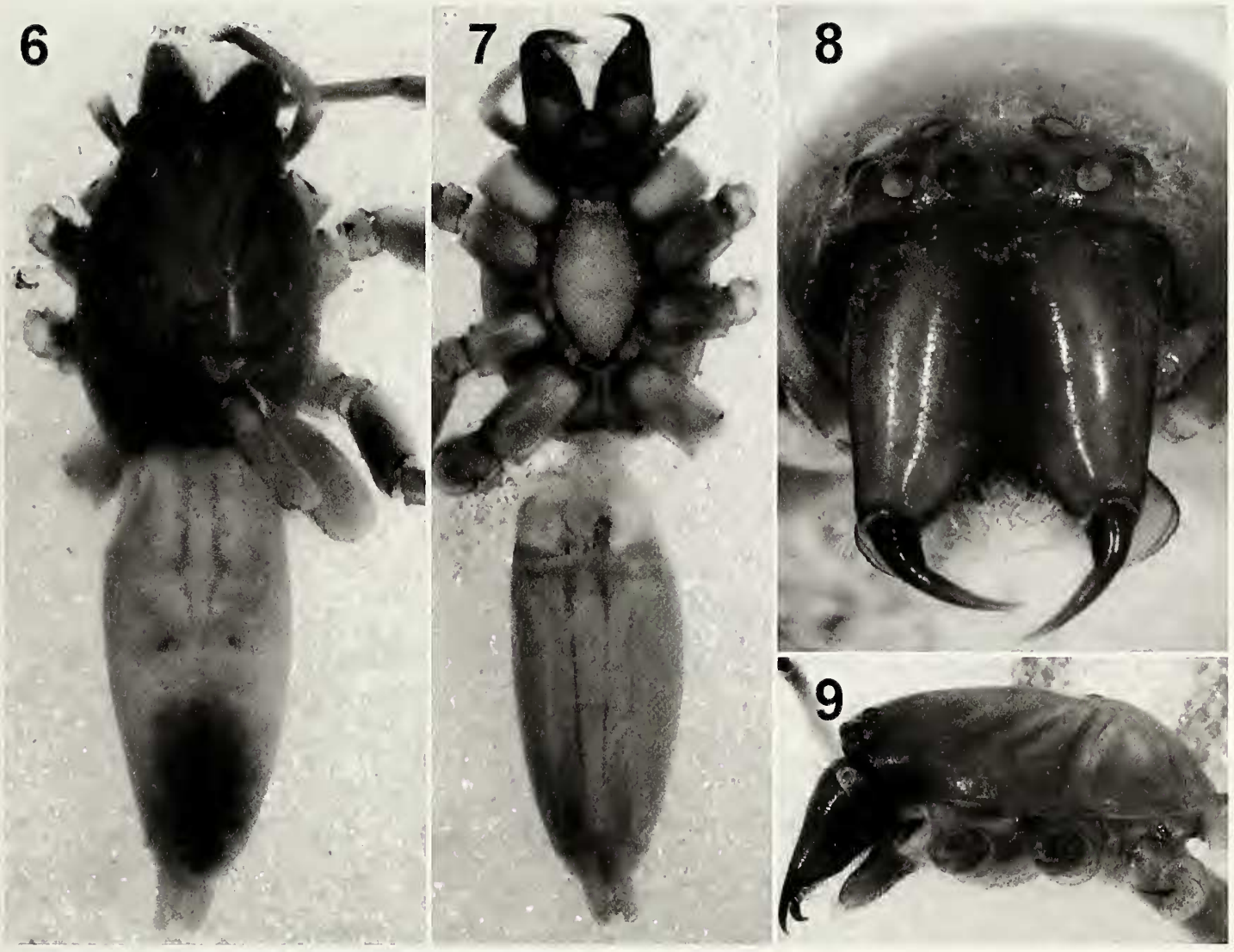
Copulatory organ: As in diagnosis. Epigynal field as long as wide, with two slit sense organs antero-laterally. Copulatory openings situated medially in posterior half, accompanied by slightly semicircular pockets. Bilobal posterior margin extending slightly beyond epigastric furrow (Fig. 1). Copulatory ducts short, running first slightly converging in anterior direction, then bending laterally and leading into less sclerotised bursae. The latter broadly connected to sclerotised and thick-walled spermathecae. Fertilization ducts arising laterally, pointing antero-laterally (Fig. 2). A glandular appendage as present in *C. danirkovaci* (Decleman-Reinhold 2001: Fig. 23) or *C. maipai* (Jäger & Dankittipakul 2010: Figs. 42–44) could not be observed (Fig. 3). The bad condition of the holotype did not allow further treatment, therefore only a preliminary course of the internal duct system can be provided.

Coloration in ethanol: The bad condition of the holotype allows almost no statements about the real coloration. Prosoma and legs seem to be reddish brown, and darker than opisthosoma. Labium with distinct and broad bright lip distally. Dorsal opisthosoma with one pair of muscle sigilla in the middle and an extensive dark patch in posterior half (Figs. 6–9).

Male: unknown.

Distribution.—Known only from the type locality (Fig. 10). Although the species may have a wider range, the records cited by Platnick (2011) are insufficient to establish the range of the taxon (see introduction; localities concerned: India: Calcutta, Dhakuria; Bangladesh: Bagerhat, Barisal, Dhaka, Jhenidah, Jessore, Khulna, Rajshahi).

Relationships.—Because of the posteriorly situated copulatory openings and the unique course and shape of the internal duct system, *C. analis* is clearly placed in the *hystrix*-group. It differs from other *hystrix* group species in having its orifices not hidden by a hood (Fig. 1), as described in the diagnosis in Deeleman-Reinhold (2001:101). The epigynal pockets accompanying the openings are, again, similar to typical *hystrix*-group representatives. *D. danirkovaci* is most similar referring to the structure of its female copulatory organs, but there are more species to be considered; e.g., described or



Figures 6–9.—*Clubiona analis* Thorell 1895, holotype female from Burma, Double Island, habitus (6 dorsal; 7 ventral; 8 prosoma, frontal; 9 prosoma, lateral).

listed in Chrysanthus (1967) from New Guinea (*C. ericius, C. meraukensis*). *C. maipai* (known from both male and female) and *C. kuu* (only known from the male) also seems related according to the similarity of the male copulatory organ of both species to that of *C. dunirkovaci*. Fresh material from both sexes of *C. analis* would help to illuminate relationships within the *hystrix* group.

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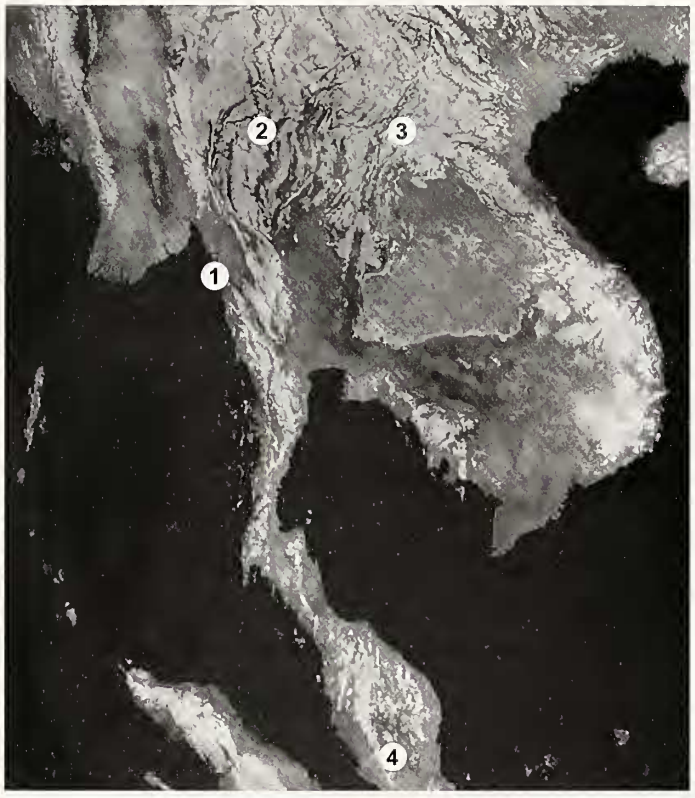

Figure 10.—Type localities of representatives of the *Clubiona lystrix*-group: 1. *Clubiona analis* Thorell 1895, Burma, Double Island; 2. *Clubiona naipai* Jäger & Dankittipakul 2010, Thailand, Mae Hong Son Province, Ban Nam Rin; 3. *Clubiona kuu* Jäger & Dankittipakul 2010, Laos, Luang Prabang Province, Ban Keng Koung; 4. *Clubiona dauvkovaci* Deeleman-Reinhold 2001, Malaysia, Gombak Research Station.